EastFIRE Conference

Climate Change – Demographic Change
21st Century Fire Management

George Mason University

June 5-8, 2007

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Conference Theme

Wildland fire is both an ecosystem process and a natural hazard. It functions as a disturbance regime that has helped to shape the Earth's vegetated ecosystems. Those ecosystems have co-evolved over many millennia with climate change and under increasing human influence. Humans have combated fire as a threat to their well being and used fire as an accelerant for land use change. Fire serves as a non-linear amplifier of climate change, and other stressors that work over months and years, by resetting ecosystems in minutes, hours and days.

Demographic and Climate change have emerged, in our early 21st Century scientific understanding, as the strongest drivers of global, regional, and local fire trends. Demographic trends are increasing societal exposure to fire, thus increasing its natural hazard role. The Wildland Urban Interface (WUI) concept has scientifically matured and is cited as a major concern in strategic insurance industry assessments. International Sustainable Forest Management (SFM) Criteria and Indicators (C&I) are undergoing second generation updating and are increasingly likely to be available as endpoints for future management valuations. The eastern United States with over 70% of the U.S. population, with over 50% of the forest land (84% of which is privately owned), largely reforested over the past 100+ years, and projected to be subject to large climate change stress, offers a particular microcosm for considering fire in adaptively managing for sustainable values in the face of demographic and climatic change.

The theme of the 2007 EastFIRE Conference is consideration of the manifold consequences for fire management of anticipated 21st Century climate and demographic changes. Today's natural resource management is largely focused on maintaining current conditions or restoring ecosystems to some previous state. 21st Century management is likely to require management for future conditions that significantly altered from past regimes. While science has provided outlooks for future conditions, it has not provided managers with assessment and decision support tools needed to formulate adaptive responses for those outlooks. Current fire science knowledge is the foundation for building future solutions

Conference Objectives

The purpose of the 2007 EastFIRE Conference is to enable participants to share current knowledge for an inclusive array of studies and to reflect on future directions in consideration of the Conference theme. Current fire science knowledge is flowing as a result of such programs as the Joint Fire Science Program (JFSP), the National Fire Plan (NFP), and Earth Observing System (EOS) launches. The Conference Program will be structured to include an inclusive array of traditional fire science components, ranging from Fuel Management and Fire Ecology to Smoke Management and Remote Sensing through Fire Modeling and Fire Weather. Advisory and Steering Committee members will work with the community to provide special sessions of interest on such topics as LANDFIRE and FCAMMS, and plenary emphases on topics such as Climate Change and the Wildland Urban Interface. Some unique communications approaches are being considered to enhance and extend the utility of the Conference as a sustainable brokerage of fire science knowledge for managers and researchers.

Major products of this conference include publication of a peer-reviewed special journal issue(s). All papers presented will be included in both a printed proceedings document and as PDF on a CD-ROM for all registered conference attendees. All conference poster sessions will have published abstracts included in the proceedings.

EastFIRE Committees

Advisory Committee

The Advisory Committee for the 2007 EastFIRE Conference provides policy level advice regarding Conference program content, organizational representation, financial resource acquisition, and after-Conference direction.

Chair: Dr. William T. Sommers, *George Mason University (GMU)*

Members:

Jim Hubbard	U.S. Forest Service State & Private Forestry
Eli Jacks	NOAA/NWS
Menas Kafatos	George Mason University
Mike C. Long	Florida Division of Forestry & NASF
Dick Mangan	International Association of Wildland Fire
Roy Patton	USFS Northern Research Station
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Peter J. Roussopoulos	USFS Southern Research Station
Robert Szaro	USGS/BRD
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Chairs: Dr. John Stanturf, *FS/SRS*, and Dr. John J. Qu, *GMU*

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Logistics Committee

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Members:

Beth Grohnke	GMU, Office of Events Management
Emmanuel Smith	GMU
Xianjun Hao	GMU
Sanjeeb Bhoi	GMU
Wanting Wang	GMU
Lingli Wang	GMU

Conference Schedule

Day	Time	Program
June 5 Tues	08:00	**Registration Desk Opens**
	09:00-09:15	**Welcome to EastFIRE**
	9:15-10:45	**Plenary Session One: Part I**
	10:45-11:00	*Break*
	11:00-12:00	**Plenary Session One: Part II**
	12:00-13:30	*Lunch Break*
	13:30-15:00	**Concurrent Sessions: A1.1, B1.1, C1.1**
	15:00-15:30	*Break*
	15:30-17:00	**Concurrent Sessions: A1.2, B1.2, C1.2**
	17:00--19:00	**Opening Reception & Poster Session**
June 6 Wed	09:00-10:40	**Plenary Session Two: Part I**
	10:40-11:00	*Break*
	11:00-12:30	**Plenary Session Two: Part II**
	12:30-13:30	*Lunch Break*
	13:30-15:00	**Concurrent Sessions: A2.1, B2.1, C2.1**
	15:00-15:30	*Break*
	15:30-17:00	**Concurrent Sessions: A2.2, B2.2, C2.2**
	17:15-18:00	***"Fire in Fairfax County" Special Presentation***
	18:00-20:00	**2007 EastFIRE Conference Hosted Social & Poster Session**
June 7 Thu	9:00-10:30	**Plenary Session Three: Part I**
	10:30-11:00	*Break*
	11:00-12:30	**Plenary Session Three: Part II**
	12:30-13:30	*Lunch Break*
	13:30-15:00	**Concurrent Sessions: A3.1, B3.1, C3.1**
	15:00-15:30	*Break*
	15:30-17:00	**Concurrent Sessions: A3.2, B3.2, C3.2**
June 8 Fri	09:00-09:30	**Panel 1: Science Overview**
	09:30-10:00	**Panel 2: Management/Policy Overview**
	10:00-10:30	**Panel 3: Education & Training Overview**
	11:00-12:00	**Panel 4: Future Directions**

Plenary Sessions Plan

Room: CINEMA (G30)

June 5 – Plenary 1.1: Setting the Science Stage
***Session Chair* – Sue Conard** *USDA FS*

Time	#	Program
9:00-9:15	P1.1.1	Opening Ceremonies **Vikas Chandhoke** ***GMU***
9:15-9:45	P1.1.2	Climate Change and Eastern Forests: Nature and Timing of Potential Impacts for Fire Management **Ronald P. Neilson** ***FS, PNW Research Station***
9:45-10:15	P1.1.3	Housing Growth in the Wildland Urban Interface: Trends and Projections for the East **Susan Stewart** ***FS NRS***
10:15-10:45	P1.1.4	Water Cycle Variability, Change, and Prediction in the Eastern United States **Paul Houser** ***GMU***

June 5 – Plenary 1.2: Setting the Policy and Management Stage
***Session Chair* – Erik Berg** *USDI/USGS/BRD*

Time	#	Program
11:00-11:15	P1.2.1	Setting the Policy & Management Stage State Fire Management **Michael Long** ***Florida Division of Forestry***
11:15-11:30	P1.2.2	Setting the Policy & Management Stage, Federal Fire Management **Dan Crittenden** ***USFS Fire Management***
11:30-11:45	P1.2.3	GAO Perspectives on Federal Wildland Fire Management Activities **Steve Gaty** ***US GAO***
11:45-12:00	P1.2.4	National Wildland Fire Weather Needs Assessment – Preliminary Results **Samuel Williamson and David Andrus** ***OFCM***

June 6 – Plenary 2.1: Climate, Remote Sensing & Modeling
***Session Chair* – John Hom** *FS/NRS*

Time	#	Program
9:00-9:35	P2.1.1	Climate Change, Abrupt Events, and Monitoring from Space **Anthony Janetos** ***Joint Global Change Research Institute***
9:35-10:05	P2.1.2	Recent advances in remote sensing and modeling tools to better estimate climate change impacts on current and future US wildfire severity **Steven McNulty** ***USDA FS***
10:05-10:40	P2.1.3	Global to Local Scale Atmospheric Hazard (Weather & Dispersion) Modeling **Zafer Boybeyi** ***GMU***

Plenary Sessions Plan

Room: CINEMA (G30)

June 6 – Plenary 2.2: Applying Science and Technology
Session Chair **– John Stanturf** *FS/SRS*

Time	#	Program
11:00-11:20	P2.2.1	Firewise Communities – Putting Fire and Social Science Research to Work **Michele Steinberg *NFPA***
11:20-11:40	P2.2.2	The Southern Group of State Foresters Southern Wildfire Risk Assessment **John Miller *VA DOF***
11:40-12:10	P2.2.3	LANDFIRE: Landscape Fire and Resource Management Planning Tools **Henry Bastian *USDI Office of Wildland Fire Coordination***
12:10-12:30	P2.2.4	Overview of the National Fire Consortia for Advanced Modeling of Meteorology and Smoke (FCAMMS) **Warren Heilman *FS/NRS***

June 7 – Plenary 3.1: Science Program Needs I
Session Chair **– Stan Coloff** *GMU*

Time	#	Program
9:00-9:20	P3.1.1	Southern U.S. View **Peter Roussopoulos** *FS/SRS*
9:20-9:40	P3.1.2	Climate – Demographics – Management: The 21st Century Fire Triangle from a Northern U.S. View **Roy Patton *FS/NRS***
9:40-10:10	P3.1.3	Fire Research Needs: A US Forest Service National Perspective **Susan Conard *USDA FS***
10:10-10:30	P3.1.4	The Progress on Forest Fire Research Using Satellite Data **Haoruo Yi *Research Institute of Forest Resources Information Techniques***

June 7 – Plenary 3.2: Science Program Needs II
Session Chair **– George Pouliot** *USEPA/NOAA*

Time	#	Program
11:00-11:20	P3.2.1	Fire Research Needs: A USGS National Perspective **Erik Berg *USGS/BRD***
11:20-11:40	P3.2.2	Burning from Wilderness to the Wildland Intergalactic Interface **Fred Wetzel *FWS***
11:40-12:10	P3.2.3	A Climate of Change – An Overview of NASA's Applied Sciences Program **Teresa Fryberger *NASA***
12:10-12:30	P3.2.4	US EPA and NOAA's Signed Memorandum of Agreement on Cooperation in Forecasting Air Quality Partnership **Gary Foley *EPA***

Concurrent Sessions

Tuesday, June 5 13:30-15:00

A1.1 – NOAA Fire Weather I

Room: CINEMA (G30) *Session Chair*: Heath Hockenberry, NOAA

Time	#	Program
13:30-13:45	A1.1.1	"A Review of 2006 Fire weather Support – A Record Year" – **Hockenberry, NOAA**
13:45-14:00	A1.1.2	"Experiences at the Sawtooth Complex – The IMET Perspective" **– Manuel, NOAA/NWS**
14:00-14:15	A1.1.3	"A Journey Down Under: NOAA's Support for Australia's 2007 Fire Season" **– Hockenberry, NOAA**
14:15-14:30	A1.1.4	"The Joint NOAA/USGS Debris-Flow Forecasting System" **– Restrepo, NOAA/NWS**
14:30-14:45	A1.1.5	"A New Automated NFDRS Forecast System" **– Petrescu, NWS/WFO**

B1.1 – Fuels, Danger & Behavior I

Room: GOLD ROOM (G19) *Session Chair*: Stan Coloff, GMU

Time	#	Program
13:30-13:50	B1.1.1	"Burning and mastication as fuel reduction treatments in beetle-killed stands: effects on ectomycorrhizal inoculum potential" **– Stottlemyer, Clemson Univ. Silviculture and Ecology Laboratory**
13:50-14:10	B1.1.2	"Restoration of Southern Appalachian mixed-Oak forests Using Fuel Reduction techniques: Is It Really Working?" **– Phillips, USDA/FS**
14:10-14:30	B1.1.3	"Numerical Simulations of the FireFlux Field Experiment" – **Goodrick, USDA FS/SRS**
14:30-14:50	B1.1.4	"Fire-Induced winds and Turbulence Observed During the FireFlux Experiment" – **Clements, University of Houston**

C1.1 – Modeling I

Room: MEETING ROOM C (327) *Session Chair*: John G. Lyon, EPA

Time	#	Program
13:30-13:45	C1.1.1	"Simulations of Two-Dimensional Dry Convective Plume Modes" **– Charney, USDAFS/NRS**
13:45-14:00	C1.1.2	"Air Quality and Climate Impacts of Smoke Aerosols from Central American Biomass Burning" **– Wang, Harvard**
14:00-14:150	C1.1.3	"A Comparison of Algorithm Performance in Forest Fire Growth Models" – **Cui, Ontario Forest Research Institute**
14:15-14:30	C1.1.4	"A fast Approach to 3D Flame Visualization" – **Wang, RIT**
14:30-14:45	C1.1.5	"Process Modeling of First Order Fire Effects: Science and Application", **Dickinson, FS/NRS**

Tuesday, June 5 15:30-17:00

A1.2 – NOAA Fire Weather II

Room: CINEMA (G30) *Session Chair*: Eli Jacks, NOAA

Time	#	Program
15:30-15:45	A1.2.1	"Current NOAA Processes to Improve Services" **– Jacks, NOAA/NWS**
15:45-16:00	A1.2.2	"Future Use of Unmanned Aircraft Systems in Support of Firefighting Operations" **– Schranz, NOAA/ESRL**
16:00-16:15	A1.2.3	"Informed and Critical use of NOAA Climate Outlook and scenario Products for Fire Planning and Mitigation in the Eastern United States" **– Livezey, NWS/Climate Services**
16:15-16:30	A1.2.4	"Innovative Lightning Forecast Guidance" **– Bothwell, NOAA/SPC**
16:30-16:45	A1.2.5	"The Operational Meteorological Assimilation Data Ingest System (MADIS)" **– O'Sullivan, NOAA/NWS**

B1.2 – Fuels, Danger & Behavior II

Room: GOLD ROOM (G19) *Session Chair*: John Hom, FS/NRS

Time	#	Program
15:30-15:45	B1.2.1	"Assessing the Effectiveness of Erosion Control Treatments After Wildfires: Experimental and Monitoring Approaches" **– Peterson, USFS**
15:45-16:00	B1.2.2	"The Impact of Atmospheric Conditions Aloft on Fire Weather and Fire Behavior Prediction in the Eastern US" **– Charney, USFS/NRS**
16:00-16:15	B1.2.3	"Combined Haines Index and Turbulent Kinetic Energy Patterns and Trends Over the Northeastern US" **– Heilman, USFS/NRS**
16:15-16:30	B1.2.4	"Implementing a Graphical and Predictive National Fire Danger Rating System for New Jersey" **– Hom, USFS/NRS**
16:30-16:45	B1.2.5	"Integration of FEAT and FIREMON: an Interagency Fire Ecology Monitoring Tool" **– Lutes, USFS**

C1.2 – Modeling II

Room: MEETING ROOM C (327) *Session Chair*: Jun Wang, Harvard

Time	#	Program
15:30-15:50	C1.2.1	"Development of a Biomass Burning Emissions Inventory by Combining Satellite and Ground-based Information" **– Pouliot, USEPA/NOAA**
15:50-16:10	C1.2.2	"A Fire Spread Model for Simulating Prescribed Burns" **– Achtemeier, USDAFS**
16:10-16:30	C1.2.3	"A Simple Model for Wind Effects of Burning Structures and Topography on WUI Ground-Fire Propagation" – **Rehm, RGR Consulting**
16:30-16:50	C1.2.4	"Research Overview for the Southern High Resolution Modeling Consortium" – **Goodrick, USFS/SRS**

Wednesday, June 6 13:30-15:00

A2.1 – LANDFIRE I

Room: CINEMA (G30) *Session Chair*: Matt Rollins, FS/MFSL

Time	#	Program
13:30-13:50	A2.1.1	"LANDFIRE: a Nationally Consistent Vegetation, Wildland Fire, and Fuel Assessment" **– Rollins, Missoula Fire Sciences Lab**
13:50-14:10	A2.1.2	"LANDFIRE Existing Vegetation and Structure Mapping: Southeastern Preliminary Mapping Methods and Results" **– Peterson, USFS**
14:10-14:30	A2.1.3	"LANDFIRE Existing Vegetation Height Mapping; potential New Data Sources for the East" **– Nelson, SAIC/EROS**
14:30-14:50	A2.1.4	"LANDFIRE Vegetation Modeling in the Central, Northern, and Southern Map Zones" **– Smith, The Nature Conservancy**

B2.1 – Fuels, Danger & Behavior III

Room: GOLD ROOM (G19) *Session Chair*: Ruixin Yang, GMU

Time	#	Program
13:30-13:50	B2.1.1	"Estimating Canopy Fuel Parameters for Atlantic Coastal Plain Forests" **– Parresol, USFS/SRS**
13:50-14:10	B2.1.2	"Measuring Absolute Radiated Energy from small Plot Experiments in eastern Hardwood Fuels Using Dual Band IR radiometry" **– Kremens, Rochester Institute of Technology**
14:10-14:30	B2.1.3	"Soil Moisture Dynamics and the Smoldering Combustion Limits of Pocosin Soils in North Carolina" **– Reardon, RMRS/Fire Science Lab**
14:30-14:50	B2.1.4	"Using Google earth for Display of Fire and Smoke Information" **– Goodrick, USFS/SRS**

C2.1 – Multi-Disciplinary

Room: MEETING ROOM C (327) *Session Chair*: Danny Lee, FS/SRS

Time	#	Program
13:30-13:50	C2.1.1	"Combining Remote Sensing and FIA data to Map Forest-Floor Fire Fuels" **– Chojnacky, USFS**
13:50-14:10	C2.1.2	"Contrasting Models of the Interactions Among Overstory Structure, Fire and Regeneration Strategies in Subtropical and Tropical Pine Forests in the SE US and Caribbean Basin" **– O'Brien, USFS**
14:10-14:30	C2.1.3	"The Interactions Among Fine Scale Heterogeneity in Fuels, Fire Behavior and Fire Effects in a Low-Intensity surface Fire Regime" – **O'Brien, USFS**
14:30-14:50	C2.1.4	"A Methodology and Assessment of Estimating Area Burned in Near-Real-Time" – **Soja, NIA (NASA LaRC)**

Wednesday, June 6 15:30-17:00

A2.2 – LANDFIRE II

Room: CINEMA (G30) *Session Chair*: Kris Lee, RMRS

Time	#	Program
15:30-15:50	A2.2.1	"Using Biophysical Settings and Landscape Modeling to Characterize Historical Vegetation and Fire Regimes" **– Rollins, USFS/MFSL**
15:50-16:10	A2.2.2	"Modeling Fuels for Landscape-scale fire Behavior and Effects Prediction" **– Ryan, FS/RMRS**
16:10-16:30	A2.2.3	"Hazardous Fuels and Restoration Planning Applications" **– Havlina, BLM**
16:30-16:50	A2.2.4	"LANDFIRE Updating Technical Plan and Preliminary Results of Research" **– Zhu, USGS**

B2.2 – Remote Sensing I

Room: GOLD ROOM (G19) *Session Chair*: Steve Ambrose, NASA

Time	#	Program
15:30-15:45	B2.2.1	"Fuel Moisture and Fire Danger Risk Mapping with EOS Measurements in the Eastern States" **– Qu**, **GMU**
15:45-16:00	B2.2.2	"Statistic Analysis of Wildland Fire Characteristics in the Southeast US" **– Wang, GMU**
16:00-16:15	B2.2.3	"Retrieval of Vegetation Canopy Fuel Moisture Content from Hyperspectral Reflectance" **– Li, Indiana University**
16:15-16:30	B2.2.4	"Development of Small Unmanned Aerial Vehicles for Fire Monitoring and Research" **– Wardell, Advanced Ceramics Research**
16:30-16:45	B2.2.5	"Estimates of Interannual Variations in Burned Areas Using GOES Instantaneous Fire Sizes" – **Zhang, ERT/NOAA/NESDIS/STAR**

C2.2 – Smoke & Air Quality I

Room: MEETING ROOM C (327) *Session Chair*: Al Riebau, FSWO R&D

Time	#	Program
15:30-15:50	C2.2.1	"Integrated Modeling of Forest Growth, Fire Emissions, and Air Quality and its Climate Feedbacks" **– Ran, Univ. North Carolina/Chapel Hill**
15:50-16:10	C2.2.2	"Near-real-time Monitoring of Biomass Burning Particulate Emissions (PM2.5) Using Multiple Satellite Data" **– Zhang, ERT/NOAA/NESDIS/STAR**
16:10-16:30	C2.2.3	"NOAA's Use of Satellite Imagery for Smoke Detection and Transport Model Initialization" – **Simko, NOAA/NESDIS**
16:30-16:50	C2.2.4	"Implementation of Satellite-detected Wildland and Prescribed Fire Emissions in Daily Air Quality Forecast Systems" – **Kim, Univ. Houston**

Thursday, June 7 13:30-15:00

A3.1 – Social & Economic

Room: CINEMA (G30) *Session Chair*: David Wong, GMU

Time	#	Program
13:30-13:50	A3.1.1	"Developing a Prescribed Fire Insurance Liability Product: Actuarial Analysis of Survey Data" **– Mitchell, Univ. Wisconsin-Madison**
13:50-14:10	A3.1.2	"Community Wildfire Protection Plans – Meeting the Objectives of HFRA?" **– Jakes, USFS**
14:10-14:30	A3.1.3	"Social Learning and the Role of Science in Community Wildfire Protection Planning" **– Brummel, Univ. Minnesota**
14:30-14:50	A3.1.4	"Defining the Wildland-Urban Interface: How Local Government Becomes a Partner at the Table in Community Wildfire Planning" **– Grayzeck, Univ. Minnesota**

B3.1 – Remote Sensing II

Room: GOLD ROOM (G19) *Session Chair*: Zhiliang Zhu, USGS

Time	#	Program
13:30-13:50	B3.1.1	"Regeneration of Vegetation Index After Wildland Fire" **– Bhoi, GMU**
13:50-14:10	B3.1.2	"National Forest Fire Danger rating Prediction Using Remote Sensing and Geographic Information System Techniques" **– Qin, Research Institute of Forest Resource Information Techniques**
14:10-14:30	B3.1.3	"Soil-adjusted Live Fuel Moisture Estimations Over Grasslands" **– Dasgupta, GMU**
14:30-14:50	B3.1.4	"Multi-sensor Detection of Hurricane-caused Forest Fuel Loading Change in the Southeastern United States" **– Wang, GMU**

C3.1 – Smoke & Air Quality II

Room: MEETING ROOM C (327) *Session Chair*: S. Kondragunta, NOAA

Time	#	Program
13:30-13:50	C3.1.1	"Prescribed Fire Emission and the Impact on Air Quality over the Southeastern US in Spring" **– Zeng, Georgia Institute of Technology**
13:50-14:10	C3.1.2	"Observation of Fire Smoke Plume Dynamics Using Elastic LiDAR" **– Williams, USEPA**
14:10-14:30	C3.1.3	"An Automated GOES-12 Smoke Plume Detection and Tracking Algorithm for Air Quality Applications" – **Zeng, ERT**
14:30-14:50	C3.1.4	"A Sensitivity Study of Air Quality simulation to Smoke Plume-Core Number" – **Liu, USFS**

Thursday, June 7 15:30-17:00

A3.2 – Science Delivery

Room: CINEMA (G30) *Session Chair*: Brian J. Stocks, Forestry Canada

Time	#	Program
15:30-15:45	A3.2.1	"Planning for Increased Fire Activity in the Face of Climate and Demographic Change – triage or Risk Assessment?" **– Sommers, GMU**
15:45-16:00	A3.2.2	"Decision Support Tools to Optimize the Effectiveness of Hazardous Fuel Reduction Treatments" **– Clark, USFS**
16:00-16:15	A3.2.3	"Air Quality Impacts from Forest Fires Under Different Forest Management Practices" **– Di Tian, GA Dept. of Natural Resources**
16:15-16:30	A3.2.4	"The Eastern LANDFIRE Prototype – Lessons Learned" **– Van Tuyl, USFS**
16:30-16:45	A3.2.5	"Mapping the Wildland-Fire Interface in the Eastern LANDFIRE Prototype Region" – **Bishop, Woods Hole Research Center**

B3.2 – Remote Sensing III

Room: GOLD ROOM (G19) *Session Chair*: John J. Qu, GMU

Time	#	Program
15:30-15:50	B3.2.1	"Soil Moisture Estimation with Multiple MODIS SRB Measurements" **– Wang, GMU**
15:50-16:10	B3.2.2	"Dead Fuel Moisture Content Estimation Using AIRS Measurements" **– Hao, GMU**
16:10-16:30	B3.2.3	"Global Near-Real-Time Estimates of Biomass Burning Emissions Using MODIS Fire Detections" **– Al-Saadi, NASA/LaRC**
16:30-16:50	B3.2.4	"Forest Height and Biomass Estimation from SRTM, Landsat ETM+, and Forest Inventory and Analysis Data" **– Kellndorfer, WHRC**

C3.2 – Smoke & Air Quality III

Room: MEETING ROOM C (327) *Session Chair*: Yong Liu, USFS/SRS

Time	#	Program
15:30-15:45	C3.2.1	"Detection of Smoke Plumes from Forest Fires Using MODIS Measurements" **– Xie, GMU**
15:45-16:00	C3.2.2	"Comparison of CMAQ-derived *CO* Columns with MOPITT *CO* Data: Sensitivity to Wildfire Emissions" **– Szykman, EPA/ESD/NERL**
16:00-16:15	C3.2.3	"On a Method to Index Multiple-Core Updraft Smoke Plumes" – **Achtemeier, USFS**
16:15-16:30	C3.2.4	"Effects of Smoke Moisture on Local Air Quality: Visibility and Superfog" – **Achtemeier, USFS**
16:30-16:45	C3.2.5	" Application of CMAQ Model for Prediction of Particulate Matter Emissions Due to Wildland Fire" – **Bhoi**, **GMU**

Poster Sessions/Reception

June 5, 17:00-19:00 & June 6, 18:00-20:00

Room: DEWBERRY HALL

Poster #	Program
1	"Housing Density and Wilderness Fire Management" **– Hawbaker, *Univ. Wisconsin***
2	"Objective Boundary Detection in the Eastern United States – Sea-Breeze and Coastal Fronts, and Back-Door and Side-Door Cold Fronts" **– Charney, *USFS/NRS***
3	"Indices for Comparing Geometry of Simulated Forest Fire Patches" **– Cui**, ***Ontario Forest Research Institute***
4	"Fire Frequency Effects on Soil Microarthropod Community Composition in Longleaf Pine Flatwoods" **– Callaham**, ***USFS***
5	"The Water Budget Model of Litter Layer to Estimate the Inter-daily Change Estimation of Forest Fire Hazard Map" – **Tamai**, ***Japanese Forestry Society***
6	"Radiative and Climatic Response to Prescribed Burns in the Southeast" **– Liu**, ***USFS***
7	"Quality Assessment of LANDFIRE Vegetation Products" **– Tolk**, ***SAIC/EROS***
8	"Using a Lagrangian Particle Dispersion Model to Predict Microscale Smoke Transport and Dispersion from Wildland and Prescribed Fires" **– Bian**, ***USFS/NRS***
9	"Evaluation of Historic NFDRS Indices as Predictors of Hazardous Fire Weather in the New Jersey Pine Barrens" **– Skowronski**, ***USFS/NGCP***
10	"Seasonal Variation of Fires in the Southeastern United States: MODIS Fire Counts vs. the Emission Inventory" – **Zeng**, ***GA Institute of Tech.***
11	"Progress in Studying Forest and Grassland Fire by using Remote Sensing, Ecological Model and Climate Information in China" **– Zhang**, ***Chinese Academy of Meteorological Sciences***
12	"Use of a Binary Logistic Regression Technique with MODIS Data to Model Forest Fire Prediction" **– Fan, *GMU***
13	"Integration of FEAT and FIREMON" **– Lutes**, ***USFS***
14	"Climate Changes and Wildfire Activity in Eastern U.S." **– Kim**, ***GMU***
15	"Considerations for Remote Sensing on Southeastern Burns" – **Key**, ***USGS***

Special Presentation

Wednesday June 6, 17:15-18:00

Room: CINEMA (G30)

"Fairfax County Fire History – Past as Prelude to Future"
Karen Washburn, *Historian*

Noted historian Karen Washburn presents a history of Fairfax County, Virginia fire using rare photographs and historic documents. During drought periods in the first third of the 20th Century, the County experienced frequent fires that burned predominantly rural acreage. Those burned over lands are today filled with houses and regenerated forest stands. Fairfax County exemplifies demographic changes occurring in the eastern United States and may see a return to historic fire conditions when drought conditions reoccur. Please join us for this special presentation in which the knowledge of the past will help inform our understanding of the future.

Panel Sessions

Friday June 8, 9:00 – 12:00

Room: CINEMA (G30)

Time	#	Program
9:00-9:30	Panel 1	"Science Overview" – Chair: **Peter J. Roussopoulos**, ***USFS/SRS***
9:30-10:00	Panel 2	"Management/Policy Overview" – Chair: **Chuck Bushey**, ***President, International Association of Wildland Fire***
10:00-10:30	Panel 3	"Education & Training Overview" – Chair: **David Wong**, ***GMU***
11:00-12:00	Panel 4	"Future Directions" – Chair: **Sue I. Stewart**, ***USFS/NRS***

Session Chair Information

Session	Chair	E-mail
P1.1	Susan Conard	sconard@fs.fed.us
P1.2	Erik Berg	eberg@usgs.gov
P2.1	John Hom	jhom@fs.fed.us
P2.2	John Stanturf	jstanturf@fs.fed.us
P3.1	Stan Coloff	stan@stan.coloff.name
P3.2	George Pouliot	Pouliot.George@epamail.epa.gov
A1.1	Heath Hockenberry	Heath.Hockenberry@noaa.gov
A1.2	Eli Jacks	elliott.jacks@noaa.gov
A2.1	Matt Rollins	mrollins@fs.fed.us
A2.2	Kristine Lee	kristinelee@fs.fed.us
A3.1	David Wong	dwong2@gmu.edu
A3.2	Brian Stocks	brianstocks@sympatico.ca
B1.1	Stan Coloff	stan@stan.coloff.name
B1.2	John Hom	jhom@fs.fed.us
B2.1	Ruixin Yang	yang@yang.gmu.edu
B2.2	Stephen Ambrose	sambrose@nasa.gov
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C3.1	Shobha Kondragunta	Shobha.Kondragunta@noaa.gov
C3.2	Yong Liu	yliu@fs.fed.us

Conference Contact Information

Johnson Center Information Desk – 703-993-9000

Regarding conference topics, abstracts, papers, posters and presentations, please contact

Dr. John Qu Email: jqu@gmu.edu

Regarding conference policy issues, sponsors, display space and hotel information, please contact

William Sommers Email: wsommers@gmu.edu

For online submission accounts and conference database problems, please contact database manager

Sanjeeb Bhoi Email: sbhoi@gmu.edu

Regarding Registration and General Event Information, please contact
Beth Grohnke Email: sgrohnke@gmu.edu

Regarding conference website problems, please contact webmaster
Wanting Wang Email: eastfire@gmu.edu

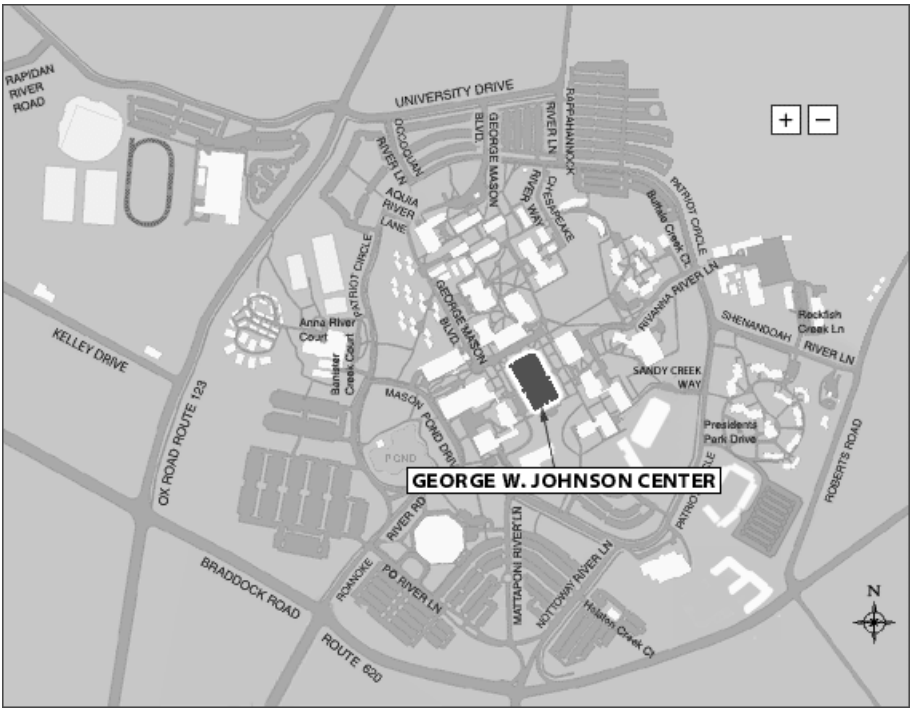
Mailing Address

EastFIRE Conference 2007
C/O Dr. John Qu
College of Science MS 6A2
George Mason University
4400 University Drive
Fairfax, Virginia 22030

Maps and Directions, Local Information

Conference venue

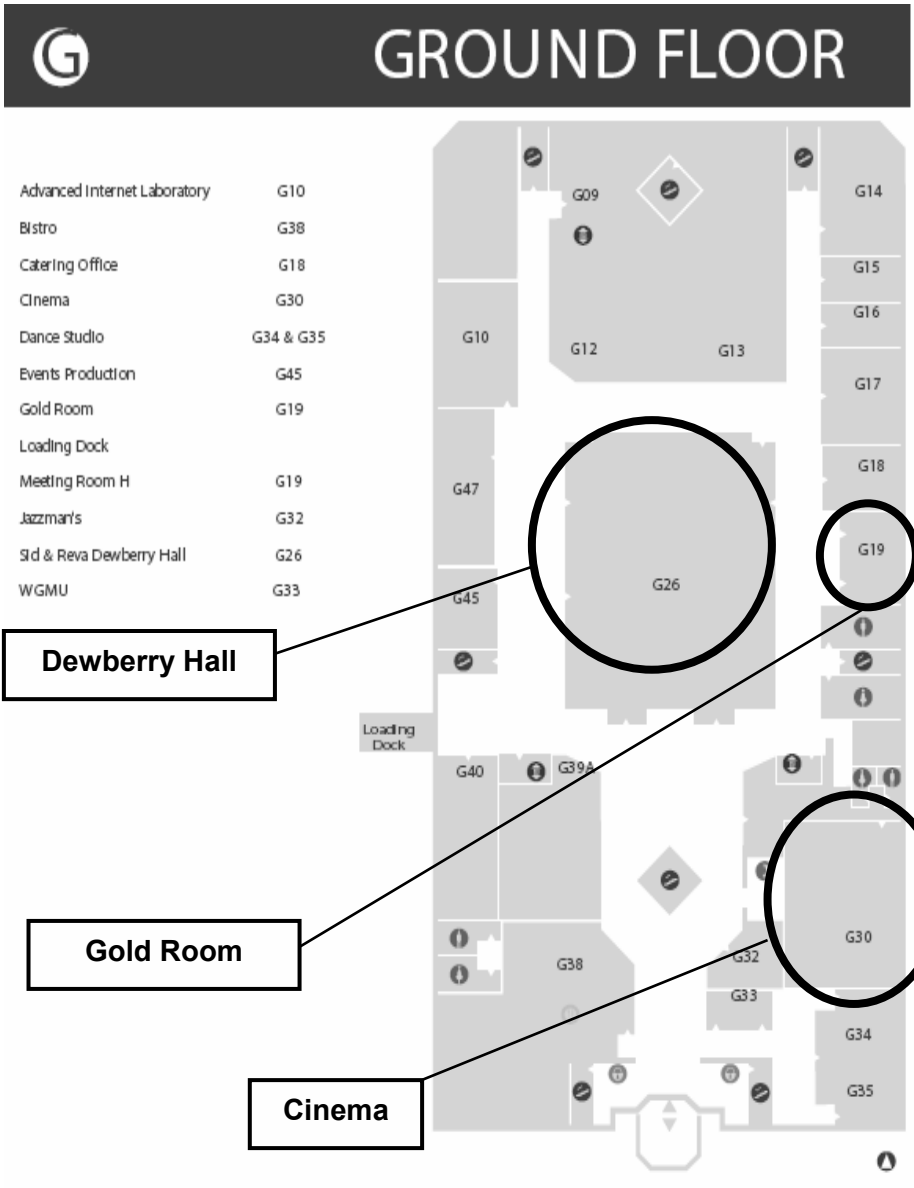
Johnson Center,
Fairfax Campus,
George Mason University.
4400 University Dr.
Fairfax, VA 22030
Tel: 703-993-9000



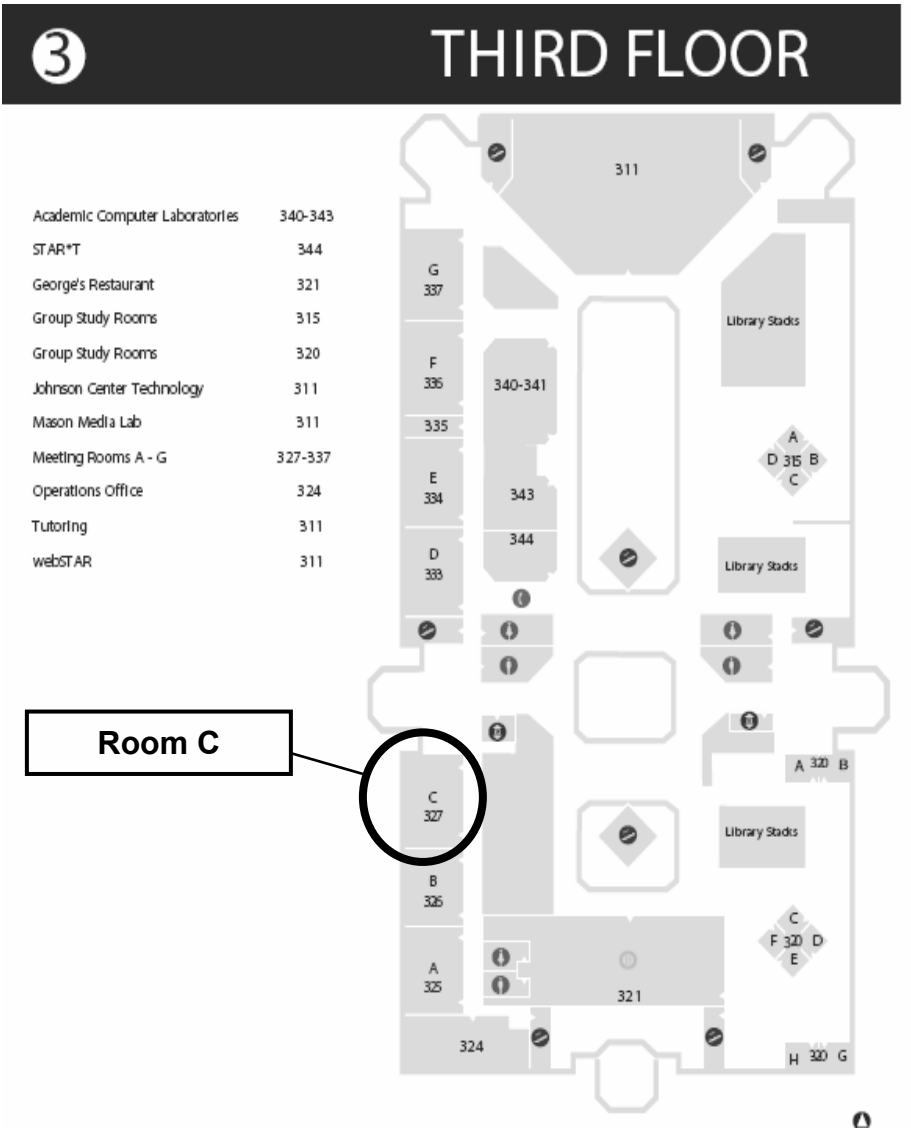
All Conference activities will be held in the **Johnson Center**.

- Plenary Sessions, Concurrent Session A, Special Presentation, and Panel Sessions: **Cinema, Room G30**.
- Concurrent Sessions B, Poster Sessions, and Receptions/Meals: **Dewberry Hall**, **Room G26**.
- Concurrent Sessions C: **Meeting Room C, 3rd Floor, Room 327**.

Johnson Center Ground Floor Map

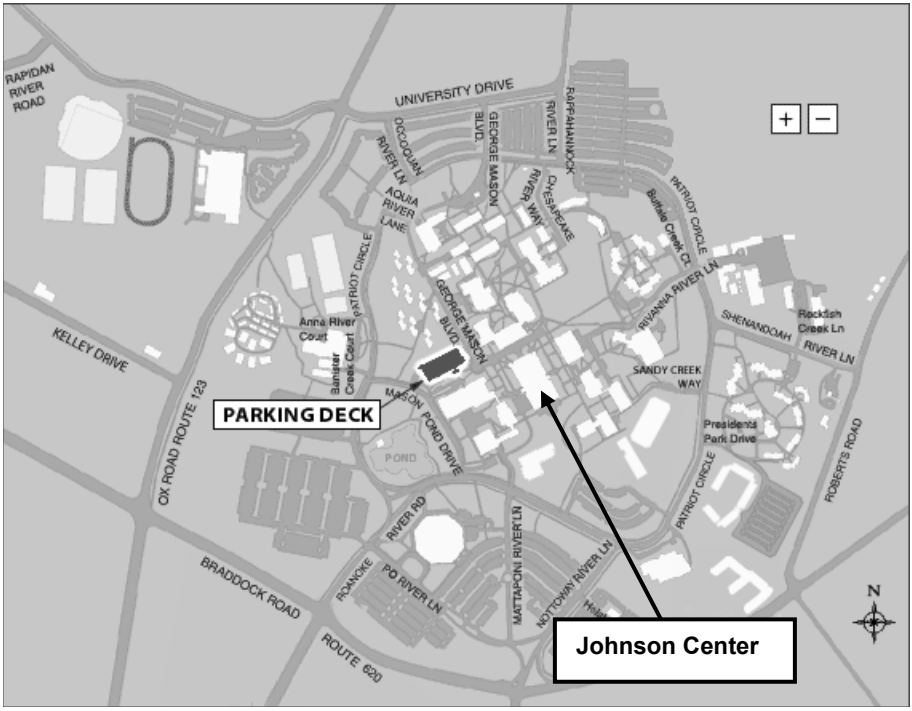


Johnson Center 3rd Floor Map



Parking Information

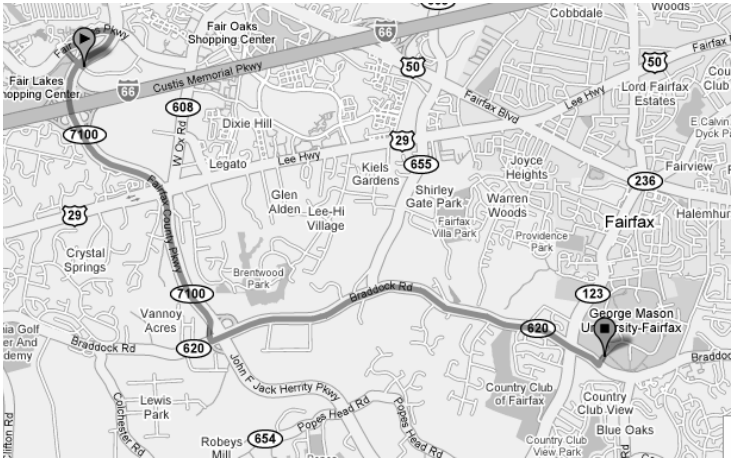
For local attendees or attendees with private vehicles, conference parking is available in the Mason Pond Parking Deck free of charge with validation on a daily basis, available at the EastFIRE Registration Desk.



Conference Hotel Information

Conference Hotel:

Hyatt Fair Lakes
12777 Fair Lakes Circle
Fairfax, VA 22033, USA
Tel: 703-818-1234 Fax: 703-653-6190



From Conference Hotel to GMU Campus (Mason Pond Parking Deck): Take Fairfax County Parkway (VA-7100) South, take the Braddock Rd (VA-620) exit, turn Left onto Braddock Rd East, turn Left onto Roanoke River Road (Campus entrance), stay right and continue on Patriot Circle, turn Left onto Mason Pond Dr to Parking Deck.

Hotel/Conference Shuttle Service:

A shuttle service will be offered between the Conference Hotel and EastFIRE Conference Venue free of charge for Hyatt Fair Lakes hotel guests. Shuttle schedules can be obtained from the EastFIRE Registration desk throughout the conference, as well as at the Hyatt Fair Lakes front desk.

Directions to Fairfax Campus

From the Capital Beltway (I-495) Take exit 54, Braddock Road (Route 620), and take the westbound fork. Follow Braddock Road West for approximately six miles. Pass the first entrance to the university and turn right at the stop light at Roanoke River Road. Bear right at the fork in the road. Take your first left onto Mason Pond Drive; parking is available in the Parking Deck, the last building on the right. An information kiosk is located outside the third level of the deck to help you navigate the campus.

Via I-66E From Front Royal & Fairfax County Pkwy Exit at the Fairfax County Parkway South (Route 7100). Exit the Parkway at Braddock Road, and turn left onto Braddock Road. Take the first left past Route 123 (Ox Road) onto Roanoke River Road. Bear right at the fork in the road. Take the first left on Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

Via I-66W from D.C. or Arlington Take exit 60 at Route 123 South, Chain Bridge Road. Follow Route 123 through the City of Fairfax, and turn left at University Drive. Take your first right at Occoquan River Lane. Turn right at the stop sign onto Patriot Circle. At the pond, bear left to stay on Patriot Circle. Take your first left on Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM I-95 (NORTH OR SOUTH) From points north on I-95, take exit 27 (I-495 West), then follow the directions "from the Capital Beltway (I-495)." From points south on I-95, take exit 160B (Route 123 North) at Lake Ridge/Occoquan. Follow Route 123 north for approximately 15 miles to Braddock Road. Turn right on Braddock Road. At first signal, turn left on Roanoke River Road. Bear right at the fork in the road. Take your first left onto Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM WASHINGTON DULLES INTERNATIONAL AIRPORT Exit the airport onto the Dulles Access Road, which leads to the Dulles Toll Road at Route 267, Reston Parkway. Exit the Dulles Toll Road (no toll required) at exit 11, Fairfax County Parkway South. Follow the Parkway, and exit at Braddock Road. At the signal turn left on Braddock Road. Take the first left past Route 123 onto Roanoke River Road, and go right at the fork in the road. Take your first left onto Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM RONALD REAGAN WASHINGTON NATIONAL AIRPORT When exiting the airport, follow the signs to Washington, DC North and to the George Washington Parkway north, to I-395. Once on G.W. Parkway, stay in the middle lane to enter I-395 south to Richmond. Immediately move left 3 lanes to remain on I-395 south. Exit I-395 at I-495 North (exit 1C) to Rockville. Exit I-495 at exit 54, Braddock Road West, and take the westbound fork. Follow Braddock Road West for approximately 6 miles. Turn right at Roanoke River Road. Bear right at the fork in the road. Turn left on Mason Pond Drive; parking is available in the Parking Deck.

Acknowledgements

George Mason University Since 1972, the university's development has been marked by rapid growth and innovative planning. Drawing prominent scholars from all fields, George Mason's outstanding faculty includes two Nobel Laureates in Economic Science, the Robinson Professors, a Pulitzer Prize winner, IEEE Centennial Medalists, and recipients of numerous grants and awards, including Fulbright, National Science Foundation, and National Endowment for the Arts awards. Endowed chairs have also brought many artists and scholars to campus.

IAWF The International Association of Wildland Fire (IAWF) is a non-profit, professional association representing members of the global wildland fire community. The purpose of the association is to facilitate communication and provide leadership for the wildland fire community.

JFSP The Joint Fire Science Program was established in 1998 to provide scientific information and support for fuel and fire management programs. The program is a partnership of six federal agencies; the Forest Service in the Agriculture Department and the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Geological Survey, all in the Department of Interior.

NASA Since its inception in 1958, NASA has accomplished many great scientific and technological feats in air and space. NASA technology also has been adapted for many non-aerospace uses by the private sector

NFPA The National Fire Protection Association/ Firewise was established in 1896 and serves as the world's leading advocate of fire prevention and is an authoritative source on public safety. NFPA's focus on true consensus has helped the association's code-development process earn accreditation from the American National Standards Institute (ANSI).

Firewise The National Firewise Communities program is a multi-agency effort designed to reach beyond the fire service in the effort to protect people, property, and natural resources from the risk of wildland fire – before a fire starts.

NOAA The National Oceanic and Atmospheric Administration (NOAA) is established in 1970. NOAA's mission is to describe and predict changes in the Earth's environment, and conserve and manage wisely the Nation's coastal and marine resources to ensure sustainable economic opportunities.

UCAR University Corporation for Atmospheric Research, NCAR, and UOP are part of a collaborative community dedicated to understanding the atmosphere – the air around us – and the interconnected processes that make up the Earth system, from the ocean floor to the Sun's core. The National Center for Atmospheric Research and the UCAR Office of Programs provide research, facilities, and services for the atmospheric and Earth sciences community.

COMET Cooperative Program for Operational Meteorology, Education and Training was established in 1989 by University Corporation for Atmospheric Research (UCAR) and the National Weather Service (NWS) to promote a better understanding of mesoscale meteorology and to maximize the benefits of new weather technologies.

EPA Research & Development The Office of Research and Development (ORD) is the scientific research arm of EPA. ORD's leading-edge research helps provide the solid underpinning of science and technology for the Agency. ORD conducts research on ways to prevent pollution, protect human health, and reduce risk.

U.S.D.A. Forest Service Established in 1905, the U.S.D.A. Forest Service is an agency of the U.S Department of Agriculture. The Forest Service manages public lands in national forests and grasslands. The fundamental responsibility is focus on stewardship and sustainability of the land, water and communities, but how that is delivered to the public is changing.

U.S.D.A. FS - Research and Development R&D is the largest forestry research organization in the world and international leader in forest conservation. As part of the Forest Service, the largest agency in the USDA, our research contributes to the advancement of science and the conservation of many of our Nation's most valuable natural resources

U.S.D.A. FS - State & Private Forestry The State & Private Forestry (S&PF) organization of the USDA Forest Service reaches across the boundaries of National Forests to States, Tribes, communities and non-industrial private landowners. S&PF is the federal leader in providing technical and financial assistance to landowners and resource managers to help sustain the Nation's forests and protect communities and the environment from wildland fires.

Northern Research Station The Northern Research Station extends across 20 states, comprising both the most densely populated and most heavily forested portion of the US. We envision a region where trees and natural resources support a high quality of life; wildlife, fish, and plant communities thrive; clean water abounds; and people work together to sustain and restore the health of forests.

Southern Research Station The Southern research Station, with headquarters located in western North Carolina, is the leading organization for research on natural resource management and sustainability in the Southern United States. With a staff of 130 scientists serving 13 Southern States, our mission is to create the science and technology needed to sustain and enhance Southern forest ecosystems and the benefits they provide.

FWS The U.S. Fish and Wildlife Service (FWS) has been using and managing fire safely and cost-effectively since the 1930s, leading to lands being in healthier ecological condition overall, with lower risk of catastrophic fire. This long-term, balanced approach to fire management benefits both people and wildlife.

USGS The U.S. Geological Survey is a federal source for science about the Earth, its natural and living resources, natural hazards, and the environment. The Biological Resources Discipline works with others to provide the scientific understanding and technologies needed to support the sound management and conservation of our Nation's biological resources.

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